



DOCKET NO.: SWAB-0003/1770-322US

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re Application of:

David Harbec, et al.

Confirmation No.: 2219

Application No.: 10/535,050

Group Art Unit: Not Yet Assigned

Filing Date: January 30, 2006

Examiner: Not Yet Assigned

For: METHOD FOR PRODUCING CARBON NANOTUBES USING A DC NON-TRANSFERRED THERMAL PLASMA TORCH

DATE OF DEPOSIT: March 28, 2006

I HEREBY CERTIFY THAT THIS PAPER IS BEING DEPOSITED WITH THE UNITED STATES POSTAL SERVICE AS FIRST CLASS MAIL, POSTAGE PREPAID, ON THE DATE INDICATED ABOVE AND IS ADDRESSED TO THE UNITED STATES PATENT AND TRADEMARK OFFICE, P.O. BOX 1450, ALEXANDRIA, VA 22313-1450.

*Elizabeth A. McLoud*

TYPED NAME: Elizabeth A. McLoud

Mail Stop Amendment  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Dear Sir:

# INFORMATION DISCLOSURE STATEMENT

Pursuant to 37 CFR § 1.56 and in accordance with 37 CFR §§ 1.97-1.98, information relating to the above-identified application is hereby disclosed. Inclusion of information in this statement is not to be construed as an admission that this information is material as that term is defined in 37 CFR § 1.56(b).

- ☒ In accordance with § 1.97(b), since this Information Disclosure Statement is being filed either within three months of the filing date of the above-identified application, within three months of the date of entry into the national stage of

DOCKET NO.: SWAB-0003/1770-322US- 2 -

PATENT

the above identified application as set forth in § 1.491, before the mailing date of a first Office Action on the merits of the above-identified application, or before the mailing date of a first Office Action after the filing of request for continued examination under § 1.114, no additional fee is required.

- ☐ In accordance with § 1.97(c), this Information Disclosure Statement is being filed after the period set forth in § 1.97(b) above but before the mailing date of either a Final Action under § 1.116 or a Notice of Allowance under § 1.311, or before an action that otherwise closes prosecution in the application, therefore:

- ☐ Certification in Accordance with § 1.97(e) is attached; or  
☐ The fee of \$180.00 as set forth in § 1.17(p) is attached.

- ☐ In accordance with § 1.97(d), this Information Disclosure Statement is being filed after the mailing date of either a Final Action under § 1.113 or a Notice of Allowance under § 1.311 but before, or simultaneously with, the payment of the Issue Fee, therefore included are: Certification in Accordance with § 1.97(e); and the submission fee of \$180.00 as set forth in § 1.17(p).

- ☒ Copies of reference numbers **1 – 8 and 28 - 32** listed on the attached Form PTO-1449 are enclosed herewith.

- ☒ Copies of reference numbers **9 - 27** on the attached Form PTO 1449 are not required to be submitted pursuant to 37 CFR § 1.98(a)(2)(i).

- ☐ Copies of references - are not being submitted because they were previously cited by or submitted to the U.S. Patent and Trademark Office in patent application number , filed for which a claim for priority under 35 U.S.C. § 120 has been made in the instant application.

**DOCKET NO.: SWAB-0003/1770-322US- 3 -**

**PATENT**

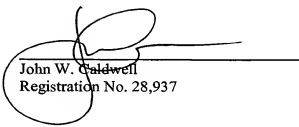
- ☐ The relevance of those listed references which are not in the English language is as follows:

There are no listed references which are not in the English language.

Please charge any deficiency or credit any overpayment to Deposit Account No. 23-3050. This form is submitted in duplicate.

Date:

*March 24 2006*



John W. Caldwell  
Registration No. 28,937

WOODCOCK WASHBURN LLP  
One Liberty Place - 46th Floor  
Philadelphia, PA 19103  
Telephone: (215) 568-3100  
Facsimile: (215) 568-3439

© 2006 WW



Sheet 1 of 3

<b>Form PTO-1449 Modified</b>  List of Patent and Publications Cited by Applicant (Use several sheets if necessary)  U.S. Department of Commerce Patent and Trademark Office		Docket No. SWAB-0003/ 1770-322US	Application No. 10/535,050
		Applicant David Harbec, et al.	
		Filing Date January 30, 2006	Group Not Yet Assigned
		Confirmation No. 2219	
<b>OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)</b>			
	1	Boulos, P., et al., "Industrial plasma engineering," <u>Thermal Plasmas Fundamental and Applications, Institute of Physics Publishing, 1994, Vol. 1, Table of Contents and Section 1.1.2.5, v-viii; 16-19</u>	
/C.B./	2	Eschenbach, et al., "Plasma torches and plasma torch furnaces," <i>Plasma Techn. In Metallurgical Processing</i> , <b>no date available, Chapter 7, 77-87</b>	
/C.B./	3	Hahn, J., et al., "New continuous gas-phase synthesis of high purity carbon nanotubes by a thermal plasma jet," <i>Carbon</i> , <b>2004, 877-883</b>	
/C.B./	4	Roth, J.R., <u>Industrial Plasma Engineering, Institute of Physics Publishing, 1995, Vol. 1, Principles, Table of Contents, v - viii</u>	
/C.B./	5	Smiljanic, O., "Gas-phase synthesis of SWNT by an atmospheric pressure plasma jet," <i>Chemical Physics Letts.</i> , <b>2002, 356, 189-193</b>	
/C.B./	6	Tian, Y., et al., "Preparation of carbon nanotube material," <i>Derwent Publications</i> , <b>2002, 1 page (Abstract)</b>	
/C.B./	7	Wang, X., et al., "A novel route to multiwalled carbon nanotubes and carbon nanorods at low temperature," <i>J. Phys. Chem. B</i> , <b>2002, 106, 933-937</b>	
/C.B./	8	Yoshikawa, H., "Manufacture of carbon monolayer nanotubes," <i>Chemical Abstract Service</i> , Accession No. 127:123749 CA, 1 page (Abstract)	
EXAMINER		/Carlos Barcena/	DATE CONSIDERED 09/24/2008

© 2006 WW



Sheet 2 of 3

<b>Form PTO-1449 Modified</b>  List of Patent and Publications Cited by Applicant (Use several sheets if necessary)  U.S. Department of Commerce Patent and Trademark Office			Docket No. SWAB-0003/ 1770-322US		Application No. 10/535,050	
			Applicant David Harbec, et al.			
			Filing Date January 30, 2006		Group Not Yet Assigned	
			Confirmation No. 2219			
<b>U. S. PATENT DOCUMENTS</b>						
Examiner Initial		Document No.	Date	Name	Class	Subclass
/C.B./	9	5,147,998	09/15/92	Tsantrizos, et al.	219	121.5
/C.B./	10	5,227,038	07/13/93	Smalley, et al.	204	173
/C.B./	11	5,395,496	03/17/95	Tsantrizos, et al.	204	173
/C.B./	12	5,482,601	01/09/96	Ohshima, et al.	204	173
/C.B./	13	5,753,088	05/19/98	Olk	204	173
/C.B./	14	5,985,232	11/16/99	Howard, et al.	423	447.3
/C.B./	15	6,063,243	05/16/00	Zettl, et al.	204	164
/C.B./	16	6,083,469	07/04/00	Leftin	423	445 B
/C.B./	17	6,099,696	08/08/00	Schwob, et al.	204	173
/C.B./	18	6,162,411	12/19/00	Howard, et al.	423	445
/C.B./	19	6,221,330 B1	04/24/01	Moy, et al.	423	447.3
/C.B./	20	6,261,532 B1	07/17/01	Ono	423	447.3
/C.B./	21	6,303,094 B1	10/16/01	Kusunoki, et al.	423	447.1
/C.B./	22	6,331,209 B1	12/18/01	Jang, et al.	117	90
/C.B./	23	6,333,016 B1	12/15/01	Resasco, et al.	423	447.3
/C.B./	24	6,350,488 B1	02/26/02	Lee, et al.	427	249.1
/C.B./	25	6,451,175 B1	09/17/02	Lal	204	173
/C.B./	26	6,455,021 B1	09/24/02	Saito	423	447.3
<b>EXAMINER</b>			/Carlos Barcena/		<b>DATE CONSIDERED</b> 09/24/2008	



Sheet 3 of 3

**Form PTO-1449 Modified**

List of Patent and Publications  
Cited by Applicant  
(Use several sheets if necessary)

U.S. Department of Commerce  
Patent and Trademark Office

Docket No.  
SWAB-0003/  
1770-322US

Application No.  
10/535,050

Applicant  
David Harbec, et al.

Filing Date  
January 30, 2006

Group  
Not Yet Assigned

Confirmation No.  
2219

**U. S. PATENT DOCUMENTS**

Examiner Initial		Document No.	Date	Name	Class	Subclass
/C.B./	27	2003/0211030 A1	11/13/03	Olivier, et al.	423	447.3

**FOREIGN PATENT DOCUMENTS**

Examiner Initial		Document No.	Date	Country	Translation	
					YES	NO
/C.B./	28	0 565 275 A1	10/13/93	EP		
/C.B./	29	WO 03/008331 A1	01/20/03	PCT		
/C.B./	30	WO 03/062146 A1	07/31/03	PCT		
/C.B./	31	WO2004/046030 A1	06/03/04	PCT		
/C.B./	32	2 499 850	01/10/06	Canada		
<b>EXAMINER</b>		/Carlos Barcena/		<b>DATE CONSIDERED</b>		09/24/2008

© 2006 WW

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /C.B./